UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,622	01/20/2004	John T. Beck	15437-0592	3546

45657 7590 11/28/2007	EXAMINER
HICKMAN PALERMO TRUONG & BECKER, LLP AND SUN MICROSYSTEMS, INC.	VERDI, KIMBLEANN C

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)	
Office Action Summary		10/761,622	BECK ET AL.	
		Examiner	Art Unit	
		KimbleAnn Verdi	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2007*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28-54* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *28-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *See Continuation Sheet*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :July 21, 2007, July 24, 2007, September 19, 2007.

DETAILED ACTION

This office action is in response to the Amendment filed on September 13, 2007. Claims

28-54 are pending in the current application. All previously outstanding objections and

rejections to the Applicant's disclosure and claims not contained in this Action have

been respectfully withdrawn by the Examiner hereto.

Response to Amendment

1.   Amendment to the specification overcomes the previous objection to the

specification.

Response to Arguments

2.   Applicant's arguments with respect to claims 28, 40, and 52 have been

considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3.   Claims 1, 32, 39-40, 44, and 52 are objected to because of the following

informalities: the recitation of "the set of user processes" should be "the set of one or

more user processes", for example claim 1, line 14;

4.   claim 39, the recitation of "initializer" should be "initialization", for example line 3.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

6.   Claims 40-54 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

With respect to claims 40-51, the "machine-readable storage medium," in accordance with Applicant's specification, may be acoustic or light waves, such as those generated during radio-wave and infra-red data communications or carrier wave (paragraphs [0092]-[0093]). This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Instead, it includes a form of energy. Energy does not fall within a statutory category since it is clearly not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

With respect to claims 52-54, an "apparatus" is being recited; however, it appears that an apparatus would reasonably be interpreted by one of ordinary skill in the art as software, per se. An apparatus as claimed does not set forth a means to realize the software, per se such as being stored in a memory or computer storage media. As such, it is believed that an apparatus of claims 52-54 is reasonably interpreted as functional descriptive material, per se.

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8.   Claims 28-54 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

Claims 28, 40, and 52 the recitation of "wherein each user process in the first set

of user processes has the first zone identifier associated therewith" and "wherein each

user process in the second set of user processes has the second zone identifier

associated therewith is not disclosed in the specification. Thorough review of the

specification by the Examiner did not result in finding of the subject matter properly

disclosed in the specification.

Claims 30, 42, and 53 the recitation of "receiving a command to terminate the

first application environment; and in response to the command to terminate the first

application environment," is not disclosed in the specification. Thorough review of the

specification by the Examiner did not result in finding of the subject matter properly

disclosed in the specification.

Claims 31, 43, and 54 the recitation of "receiving a command to re-establish the

first application environment; and in response to the command to re-establish the first

application environment," is not disclosed in the specification. Thorough review of the

specification by the Examiner did not result in finding of the subject matter properly

disclosed in the specification.

Claims 34 and 46 the recitation of "terminating all user processes executing within the first non-global zone, thereby terminating the first application environment" is not disclosed in the specification. Thorough review of the specification by the Examiner did not result in finding of the subject matter properly disclosed in the specification.

Claims 35 and 47 the recitation of "terminating all user processes executing within the first non-global zone, thereby terminating the first application environment; and

performing one or more tasks from the group consisting of stopping a scheduler process," is not disclosed in the specification. Thorough review of the specification by the Examiner did not result in finding of the subject matter properly disclosed in the specification.

Claims 36 and 48 the recitation of "a first administrator" and "a second administrator" is not disclosed in the specification. Thorough review of the specification by the Examiner did not result in finding of the subject matter properly disclosed in the specification.

Claims 38 and 50 the recitation of "wherein the configuration information comprises one or more parameters from the group consisting of a zone name, a path to a root directory for the first non-global zone, specification of one or more file systems to be mounted when the first non-global zone **is readied**, specification of one or more network interfaces, specification of one or more devices to be configured when the first non global zone **is readied**" is not disclosed in the specification. Thorough review of

the specification by the Examiner did not result in finding of the subject matter properly

disclosed in the specification.

Claims 29, 32-33, 37, 39, 41, 44-45, 49, and 51 are rejected since they are

dependent on independent claims 28, 40, and 52.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 28-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over

United States Patent Application Publication 2002/0174215 A1 to Schaefer in view of

International Application Publication WO 00/45262 to Susser et al. (hereinafter Susser).

11.   As to claim 28, Schaefer teaches the invention substantially as claimed including

a machine-implemented method, comprising:

establishing, within a global operating system environment provided by a kernel

instance (Operating System 10, Fig. 1, paragraph [0013]), a first non-global zone which

serves as a first virtual platform for supporting and isolating user processes (application

52, Fig. 2) (paragraphs [0018]-[0019]),

establishing, within said global operating system environment, a second non-

global zone which serves as a second virtual platform for supporting and isolating user

processes (application 54, Fig. 2) (paragraphs [0018]-[0019]); and

isolating the first set of one or more user processes (application 52, Fig. 2) within the first non-global zone and the second set of one or more user processes within the second non-global zone (application 54, Fig. 2) (paragraph [0012]).

Schaefer does not explicitly disclose wherein the first non-global zone has a first zone identifier associated therewith, and wherein the first non-global zone is established and exists without requiring any user processes to be running therein;

wherein the second non global zone has a second zone identifier associated therewith, and wherein the second non-global zone is established and exists without requiring any user processes to be running therein;

executing a first set of one or more user processes within the first non global zone, wherein each user process in the first set of user processes has the first zone identifier associated therewith;

executing a second set of one or more user processes within the second non-global zone, wherein each user process in the second set of user processes has the second zone identifier associated therewith; and

the first set of one or more user processes cannot access processes in the second non-global zone and the second set of one or more user processes cannot access processes in the first non-global zone.

However Susser teaches wherein the first non-global zone has a first zone identifier associated therewith (e.g. Unique Name, page 11, line 25), and wherein the first non-global zone is established and exists without requiring any user processes to be running therein (Context 1, 770, Fig. 7, page 11, lines 29-31);

wherein the second non global zone has a second zone identifier associated therewith (e.g. Unique Name, page 11, line 25), and wherein the second non-global zone is established and exists without requiring any user processes to be running therein (Context 2, 780, Fig. 7, page 11, lines 29-31);

executing a first set of one or more user processes within the first non global zone (Object 440, Fig. 9), wherein each user process in the first set of user processes has the first zone identifier associated therewith (page 11, lines 25-27);

executing a second set of one or more user processes within the second non-global zone (Object 640, 910, Fig. 9), wherein each user process in the second set of user processes has the second zone identifier associated therewith (page 11, lines 25-27); and

the first set of one or more user processes (Object 640, Fig. 6) cannot access processes in the second non-global zone (Object 636, Fig. 6) and the second set of one or more user processes cannot access processes in the first non-global zone (page 10, lines 26-31 and page 11, lines 1-2 and 13-14, e.g. Firewall, Context 1, 770, Context 2, 780, Fig. 7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the OSGuard of Schaefer with the teachings of a Firewall from Susser because this feature would have provided a mechanism in which each context is separated from the other by a context barrier between the execution contexts (page 11, lines 13-15 of Susser).

12.   As to claim 29, Schaefer teaches the method of claim 28, wherein the kernel

instance provides services (paragraph [0004]) that are invoked by the first set of user

processes (paragraph [0012]), and wherein the services are invoked by the first set of

user processes through the first virtual platform (paragraphs [0012] and [0019]).

13.   As to claim 30, Schaefer teaches the method of claim 28, wherein executing the

first set of user processes within the first non-global zone causes a first application

environment to be established within the first non-global zone (application 52, Fig. 2,

paragraph [0019] and [0023]), and where the method further comprises:

receiving a command to terminate the first application environment (e.g. unload

virtual environment, paragraph [0024]); and

in response to the command to terminate the first application environment

(paragraph [0024]), terminating (e.g. unload) all user processes executing within the first

non-global zone without halting the first non-global zone (e.g. release application by

Process Manager 120, Fig. 4), so that the first non-global zone exists even after the first

application environment is terminated (paragraph [0023]).

14.   As to claim 31, Schaefer teaches the method of claim 30, further comprising:

receiving a command to re-establish the first application environment (e.g.

process needs to be loaded, paragraph [0023]); and

in response to the command to re-establish the first application environment

(paragraph [0023]), executing (e.g. load) the first set of user processes again within the

first non-global zone (Process Environment Manager 114, Fig. 4), thereby re-

establishing the first application environment within the first non-global zone (Process

Manager 120, Fig. 4, paragraph [0023]), wherein the first application environment is re-established within the first non-global zone without having to re-establish the first non-global zone (paragraph [0023]).

15.   As to claim 32, Schaefer teaches the method of claim 28, wherein a first set of resources are associated with the first non-global zone and a second set of resources are associated with the second non-global zone (paragraphs [0019] and [0022]);

wherein the first set of resources are accessed by the first set of user processes through the first virtual platform and the second set of resources are accessed by the second set of user processes through the second virtual platform (paragraphs [0014], [0019] and [0022]); and

wherein the first set of resources and the second set of resources each include one or more resources from the group consisting of a network interface, a communications interface, a file system, a system console, a DASD address, and an operating system service process (paragraph [0022]).

16.   As to claim 33, Schaefer as modified teaches the method of claim 32, wherein isolating the first set of user processes within the first non-global zone and the second set of user processes within the second non- global zone further comprises:

preventing the first set of user processes (Object 640, Fig. 6 of Susser) from accessing the second set of resources associated with the second non global zone (Object 636, Fig. 6, page 10, lines 26-31 and page 11, lines 1-2 and 13-14, e.g. Firewall, Context 1, 770, Context 2, 780, Fig. 7 of Susser); and

preventing the second set of user processes from accessing the first set of

resources associated with the first non-global zone (page 10, lines 26-31 and page 11,

lines 1-2 and 13-14, e.g. Firewall, Context 1, 770, Context 2, 780, Fig. 7 of Susser).

17.   As to claim 34, Schaefer teaches the method of claim 32, wherein executing the

first set of user processes within the first non-global zone causes a first application

environment to be established within the first non-global zone (application 52, Fig. 2,

paragraph [0019] and [0023]), and wherein the method further comprises:

receiving a command to halt the first non-global zone (paragraph [0024]);

in response to the command to halt the first non-global zone (paragraph [0019]):

terminating all user processes executing within the first non-global zone

(unloading virtual environment, paragraph [0024]), thereby terminating the first

application environment (paragraph [0023]); and

disassociating the first set of resources from the first non-global zone (paragraph

[0024]);

wherein the second non-global zone is not affected by the command to halt the

first non-global zone (paragraph [0019]).

18.   As to claim 35, Schaefer teaches the method of claim 32, wherein executing the

first set of user processes within the first non-global zone causes a first application

environment to be established within the first non-global zone (application 52, Fig. 2,

paragraph [0019] and [0023]), and wherein the method further comprises:

receiving a command to halt the first non-global zone (paragraph [0024]);

in response to the command to halt the first non-global zone (paragraph [0019]):

terminating all user processes executing within the first non-global zone (unloading virtual environment, paragraph [0024]), thereby terminating the first application environment (paragraph [0023]); and

performing one or more tasks from the group consisting of stopping a scheduler process, unmounting one or more file systems, closing one or more network interfaces, and removing configurations for devices associated with the first non-global zone (e.g. unloading virtual environment, paragraphs [0022] and [0024]);

wherein the second non-global zone is not affected by the command to halt the first non-global zone (paragraph [0019]).

19. As to claim 36, Schaefer teaches the method of claim 28, further comprising:

allowing a first administrator to manage processes and resources within the first non- global zone (paragraph [0062]), wherein the first administrator is not allowed to manage processes and resources within the second non-global zone (paragraphs [0033] and [0062]); and

allowing a second administrator to manage processes and resources within the second non-global zone (paragraph [0062]), wherein the second administrator is not allowed to manage processes and resources within the first non-global zone (paragraphs [0033] and [0062]).

20. As to claim 37, Schaefer as modified teaches the method of claim 28, wherein establishing the first non-global zone comprises:

accessing configuration information associated with the first non-global zone (paragraphs [0024] and [0062] of Schaefer);

installing files and directories necessary for the first non-global zone to function (paragraph [0024] of Schaefer); and

readying the first non-global zone by performing one or more tasks from the group consisting of assigning the first zone identifier (e.g. Unique Name, page 11, line 25 of Susser), starting a scheduler process, establishing one or more network interfaces, mounting one or more file systems, initializing a system console, and configuring one or more devices (e.g. loading, paragraphs [0022] and [0024] of Schaefer);

wherein readying the first non-global zone does not include executing user processes within the first non global zone (page 11, lines 29-31 of Susser).

21.   As to claim 38, Schaefer as modified teaches the method of claim 37, wherein the configuration information comprises one or more parameters from the group consisting of a zone name (e.g. Unique Name, page 11, line 25 of Susser), a path to a root directory for the first non-global zone, specification of one or more file systems to be mounted when the first non-global zone is readied, specification of one or more network interfaces, specification of one or more devices to be configured when the first non global zone is readied, and specification of resource controls to be imposed on the first non-global zone (paragraph [0026] and [0040] of Schaefer).

22.   As to claim 39, Schaefer teaches the method of claim 28, wherein executing the first set of user processes within the first non-global zone comprises:

executing an initialization process (Process Manager 120, Fig. 4, paragraph [0020]); and

initializing, by the initialization process, execution of the first set of user

processes (paragraphs [0022]-[0023]).

23.   As to claims 40-51, these claims are rejected for the same reasons as claims 28-

39 respectively, since claims 40-51 recite the same or equivalent invention, see the

rejections to claims 28-39 above.

24.   As to claim 52, this claim is rejected for the same reasons as claim 1 since claim

52 recites the same or equivalent invention, see the rejection to claim 1 above.

25.   As to claim 53-54, this claim is rejected for the same reasons as claim 30-31

since claim 53-54 recites the same or equivalent invention, see the rejection to claim

30-31 above.

Conclusion

26.   The prior art made of record on the accompanying PTO-892 and not relied upon,

is considered pertinent to applicant's disclosure.

27.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

28.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KimbleAnn Verdi whose telephone number is (571) 270-1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 26, 2007
KV

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER